

RECEIVED

JUN 27 2001

1645

TECH CENTER 1600 2900

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/780,224A

DATE: 06/07/2001

TIME: 13:54:10

Input Set : A:\208859.txt

Output Set: C:\CRF3\06072001\I780224A.raw

ENTERED

3 <110> APPLICANT: Roelvink, Petrus W
 4 Kovesdi, Imre
 5 Wickham, Thomas J
 7 <120> TITLE OF INVENTION: ADENOVIRAL CAPSID CONTAINING CHIMERIC PROTEIN IX
 9 <130> FILE REFERENCE: 208859
 11 <140> CURRENT APPLICATION NUMBER: US 09/780,224A
 12 <141> CURRENT FILING DATE: 2001-02-09
 14 <150> PRIOR APPLICATION NUMBER: US 60/181,163
 15 <151> PRIOR FILING DATE: 2000-02-09
 17 <160> NUMBER OF SEQ ID NOS: 13
 19 <170> SOFTWARE: PatentIn Ver. 2.1
 21 <210> SEQ ID NO: 1
 22 <211> LENGTH: 144
 23 <212> TYPE: PRT
 24 <213> ORGANISM: Adenovirus
 26 <400> SEQUENCE: 1
 27 Met Asn Gly Thr Thr Gln Asn Asn Ala Ala Leu Phe Asp Gly Gly Val
 28 1 5 10 15
 30 Phe Ser Pro Tyr Leu Thr Ser Arg Leu Pro Tyr Trp Ala Gly Val Arg
 31 20 25 30
 33 Gln Asn Val Val Gly Ser Thr Val Asp Gly Arg Pro Val Ala Pro Ala
 34 35 40 45
 36 Asn Ser Ser Thr Leu Thr Tyr Ala Thr Ile Gly Pro Ser Pro Leu Asp
 37 50 55 60
 39 Thr Ala Ala Ala Ala Ala Ser Ala Ala Ser Thr Ala Arg Ser
 40 65 70 75 80
 42 Met Ala Ala Asp Phe Ser Phe Tyr Asn His Leu Ala Ser Asn Ala Val
 43 85 90 95
 45 Thr Arg Thr Ala Val Arg Glu Asp Ile Leu Thr Val Met Leu Ala Lys
 46 100 105 110
 48 Leu Glu Thr Leu Thr Ala Gln Leu Glu Leu Ser Gln Lys Val Glu
 49 115 120 125
 51 Glu Leu Ala Asp Ala Thr Thr His Thr Pro Ala Gln Pro Val Thr Gln
 52 130 135 140
 54 <210> SEQ ID NO: 2
 55 <211> LENGTH: 125
 56 <212> TYPE: PRT
 57 <213> ORGANISM: Adenovirus
 59 <400> SEQUENCE: 2
 60 Met Ala Glu Glu Gly Arg Ile Tyr Val Pro Tyr Val Thr Ala Arg Leu
 61 1 5 10 15
 63 Pro Lys Trp Ser Gly Ser Val Gln Asp Lys Thr Gly Ser Asn Met Leu
 64 20 25 30
 66 Gly Gly Val Val Leu Pro Pro Asn Ser Gln Ala His Arg Thr Glu Thr
 67 35 40 45
 69 Val Gly Thr Glu Ala Thr Arg Asp Asn Leu His Ala Glu Gly Ala Arg
 70 50 55 60

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/780,224A

DATE: 06/07/2001
 TIME: 13:54:10

Input Set : A:\208859.txt
 Output Set: C:\CRF3\06072001\I780224A.raw

72 Arg Pro Glu Asp Gln Thr Pro Tyr Met Ile Leu Val Glu Asp Ser Leu
 73 65 70 75 80
 75 Gly Gly Leu Lys Arg Arg Met Asp Leu Leu Glu Glu Ser Asn Gln Gln
 76 85 90 95
 78 Leu Leu Ala Thr Leu Asn Arg Leu Arg Thr Gly Leu Ala Ala Tyr Val
 79 100 105 110
 81 Gln Ala Asn Leu Val Gly Gly Gln Val Asn Pro Phe Val
 82 115 120 125
 84 <210> SEQ ID NO: 3
 85 <211> LENGTH: 125
 86 <212> TYPE: PRT
 87 <213> ORGANISM: Adenovirus
 89 <400> SEQUENCE: 3
 90 Met Ala Glu Glu Gly Arg Ile Tyr Val Pro Tyr Val Thr Ala Arg Leu
 91 1 5 10 15
 93 Pro Lys Trp Ser Gly Ser Val Gln Asp Lys Thr Gly Ser Asn Met Leu
 94 20 25 30
 96 Gly Gly Val Val Leu Pro Pro Asn Ser Gln Ala His Arg Thr Glu Thr
 97 35 40 45
 99 Val Gly Thr Glu Ala Thr Arg Asp Asn Leu His Ala Glu Gly Ala Arg
 100 50 55 60
 102 Arg Pro Glu Asp Gln Thr Pro Tyr Met Ile Leu Val Glu Asp Ser Leu
 103 65 70 75 80
 105 Gly Gly Leu Lys Arg Arg Met Asp Leu Leu Glu Glu Ser Asn Gln Gln
 106 85 90 95
 108 Leu Leu Ala Thr Leu Asn Arg Leu Arg Thr Gly Leu Ala Ala Tyr Val
 109 100 105 110
 111 Gln Ala Asn Leu Val Gly Gly Gln Val Asn Pro Phe Val
 112 115 120 125
 114 <210> SEQ ID NO: 4
 115 <211> LENGTH: 140
 116 <212> TYPE: PRT
 117 <213> ORGANISM: Adenovirus
 119 <400> SEQUENCE: 4
 120 Met Ser Ala Asn Ser Phe Asp Gly Ser Ile Val Ser Ser Tyr Leu Thr
 121 1 5 10 15
 123 Thr Arg Met Pro Pro Trp Ala Gly Val Arg Gln Asn Val Met Gly Ser
 124 20 25 30
 126 Ser Ile Asp Gly Arg Pro Val Leu Pro Ala Asn Ser Thr Thr Leu Thr
 127 35 40 45
 129 Tyr Glu Thr Val Ser Gly Thr Pro Leu Glu Thr Ala Ala Ser Ala Ala
 130 50 55 60
 132 Ala Ser Ala Ala Ala Ala Thr Ala Arg Gly Ile Val Thr Asp Phe Ala
 133 65 70 75 80
 135 Phe Leu Ser Pro Leu Ala Ser Ser Ala Ala Ser Arg Ser Ser Ala Arg
 136 85 90 95
 138 Asp Asp Lys Leu Thr Ala Leu Leu Ala Gln Leu Asp Ser Leu Thr Arg
 139 100 105 110
 141 Glu Leu Asn Val Val Ser Gln Gln Leu Leu Asp Leu Arg Gln Gln Val

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/780,224A

DATE: 06/07/2001
 TIME: 13:54:10

Input Set : A:\208859.txt
 Output Set: C:\CRF3\06072001\I780224A.raw

```

142      115          120          125
144 Ser Ala Leu Lys Ala Ser Ser Pro Pro Asn Ala Val
145      130          135          140
147 <210> SEQ ID NO: 5
148 <211> LENGTH: 140
149 <212> TYPE: PRT
150 <213> ORGANISM: Adenovirus
152 <400> SEQUENCE: 5
153 Met Ser Thr Asn Ser Phe Asp Gly Ser Ile Val Ser Ser Tyr Leu Thr
154      1           5           10          15
155 Thr Arg Met Pro Pro Trp Ala Gly Val Arg Gln Asn Val Met Gly Ser
156      20          25          30
157 Ser Ile Asp Gly Arg Pro Val Leu Pro Ala Asn Ser Thr Thr Leu Thr
158      35          40          45
159 Tyr Glu Thr Val Ser Gly Thr Pro Leu Glu Thr Ala Ala Ser Ala Ala
160      50          55          60
161 Ala Ser Ala Ala Ala Ala Thr Ala Arg Gly Ile Val Thr Asp Phe Ala
162      65          70          75          80
163 Phe Leu Ser Pro Leu Ala Ser Ser Ala Ala Ser Arg Ser Ser Ala Arg
164      85          90          95
165 Asp Asp Lys Leu Thr Ala Leu Ala Gln Leu Asp Ser Leu Thr Arg
166      100         105         110
167 Glu Leu Asn Val Val Ser Gln Gln Leu Leu Asp Leu Arg Gln Gln Val
168      115         120         125
169 Ser Ala Leu Lys Ala Ser Ser Pro Pro Asn Ala Val
170      130         135         140
171 <210> SEQ ID NO: 6
172 <211> LENGTH: 132
173 <212> TYPE: PRT
174 <213> ORGANISM: Adenovirus
175 <400> SEQUENCE: 6
176 Met Ser Gly Phe Thr Glu Gly Asn Ala Val Ser Phe Glu Gly Gly Val
177      1           5           10          15
178 Phe Ser Pro Tyr Leu Thr Thr Arg Leu Pro Ser Trp Ala Gly Val Arg
179      20          25          30
180 Gln Asn Val Val Gly Ser Asn Val Asp Gly Arg Pro Val Ala Pro Ala
181      35          40          45
182 Asn Ser Thr Thr Leu Thr Tyr Ala Thr Ile Gly Ser Ser Val Asp Thr
183      50          55          60
184 Ala Ala Ala Ala Ala Ser Ala Ala Ala Ser Thr Ala Arg Gly Met
185      65          70          75          80
186 Ala Ala Asp Phe Gly Leu Tyr Asn Gln Leu Ala Ala Ser Arg Leu Arg
187      85          90          95
188 Glu Glu Asp Ala Leu Ser Val Val Leu Thr Arg Leu Glu Glu Leu Ser
189      100         105         110
190 Gln Gln Leu Gln Asp Met Ser Ala Lys Met Ala Leu Leu Asn Pro Pro
191      115         120         125
192 Ala Asn Thr Ser
193      130

```

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/780,224A

DATE: 06/07/2001
TIME: 13:54:10

Input Set : A:\208859.txt
Output Set: C:\CRF3\06072001\I780224A.raw

213 <210> SEQ ID NO: 7
214 <211> LENGTH: 133
215 <212> TYPE: PRT
216 <213> ORGANISM: Adenovirus
218 <400> SEQUENCE: 7
219 Met Ser Gly Ser Met Glu Gly Asn Ala Val Ser Phe Lys Gly Gly Val
220 1 5 10 15
222 Phe Ser Pro Tyr Leu Thr Thr Arg Leu Pro Ala Trp Ala Gly Val Arg
223 20 25 30
225 Gln Asn Val Met Gly Ser Asn Val Asp Gly Arg Pro Val Ala Pro Ala
226 35 40 45
228 Asn Ser Ala Thr Leu Thr Tyr Ala Thr Val Gly Ser Ser Val Asp Thr
229 50 55 60
231 Ala Ala Ala Ala Ala Ser Ala Ala Ala Ser Thr Ala Arg Gly Met
232 65 70 75 80
234 Ala Ala Asp Phe Gly Leu Tyr Asn Gln Leu Ala Ala Ser Arg Ser Leu
235 85 90 95
237 Arg Glu Glu Asp Ala Leu Ser Val Val Leu Thr Arg Met Glu Glu Leu
238 100 105 110
240 Ser Gln Gln Leu Gln Asp Leu Phe Ala Lys Val Ala Leu Leu Asn Pro
241 115 120 125
243 Pro Ala Asn Ala Ser
244 130
246 <210> SEQ ID NO: 8
247 <211> LENGTH: 130
248 <212> TYPE: PRT
249 <213> ORGANISM: Adenovirus
251 <220> FEATURE:
252 <221> NAME/KEY: misc_feature
253 <222> LOCATION: (2)..(5)
254 <223> OTHER INFORMATION: "Xaa" may be any amino acid
256 <220> FEATURE:
257 <221> NAME/KEY: misc_feature
258 <222> LOCATION: (7)..(7)
259 <223> OTHER INFORMATION: "Xaa" may be any amino acid
261 <220> FEATURE:
262 <221> NAME/KEY: misc_feature
263 <222> LOCATION: (9)..(9)
264 <223> OTHER INFORMATION: "Xaa" may be any amino acid
266 <220> FEATURE:
267 <221> NAME/KEY: misc_feature
268 <222> LOCATION: (11)..(11)
269 <223> OTHER INFORMATION: "Xaa" may be any amino acid
271 <220> FEATURE:
272 <221> NAME/KEY: misc_feature
273 <222> LOCATION: (21)..(21)
274 <223> OTHER INFORMATION: "Xaa" may be any amino acid
276 <220> FEATURE:
277 <221> NAME/KEY: misc_feature

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/780,224A

DATE: 06/07/2001
TIME: 13:54:10

Input Set : A:\208859.txt
Output Set: C:\CRF3\06072001\I780224A.raw

278 <222> LOCATION: (30)..(30)
279 <223> OTHER INFORMATION: "Xaa" may be any amino acid
281 <220> FEATURE:
282 <221> NAME/KEY: misc_feature
283 <222> LOCATION: (34)..(34)
284 <223> OTHER INFORMATION: "Xaa" may be any amino acid
286 <220> FEATURE:
287 <221> NAME/KEY: misc_feature
288 <222> LOCATION: (45)..(45)
289 <223> OTHER INFORMATION: "Xaa" may be any amino acid
291 <220> FEATURE:
292 <221> NAME/KEY: misc_feature
293 <222> LOCATION: (54)..(57)
294 <223> OTHER INFORMATION: "Xaa" may be any amino acid
296 <220> FEATURE:
297 <221> NAME/KEY: misc_feature
298 <222> LOCATION: (69)..(69)
299 <223> OTHER INFORMATION: "Xaa" may be any amino acid
301 <220> FEATURE:
302 <221> NAME/KEY: misc_feature
303 <222> LOCATION: (74)..(76)
304 <223> OTHER INFORMATION: "Xaa" may be any amino acid
306 <220> FEATURE:
307 <221> NAME/KEY: misc_feature
308 <222> LOCATION: (79)..(83)
309 <223> OTHER INFORMATION: "Xaa" may be any amino acid
311 <220> FEATURE:
312 <221> NAME/KEY: misc_feature
313 <222> LOCATION: (86)..(86)
314 <223> OTHER INFORMATION: "Xaa" may be any amino acid
316 <220> FEATURE:
317 <221> NAME/KEY: misc_feature
318 <222> LOCATION: (88)..(90)
319 <223> OTHER INFORMATION: "Xaa" may be any amino acid
321 <220> FEATURE:
322 <221> NAME/KEY: misc_feature
323 <222> LOCATION: (92)..(95)
324 <223> OTHER INFORMATION: "Xaa" may be any amino acid
326 <220> FEATURE:
327 <221> NAME/KEY: misc_feature
328 <222> LOCATION: (98)..(98)
329 <223> OTHER INFORMATION: "Xaa" may be any amino acid
331 <220> FEATURE:
332 <221> NAME/KEY: misc_feature
333 <222> LOCATION: (100)..(101)
334 <223> OTHER INFORMATION: "Xaa" may be any amino acid
336 <220> FEATURE:
337 <221> NAME/KEY: misc_feature
338 <222> LOCATION: (105)..(105)

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/780,224A

DATE: 06/07/2001

TIME: 13:54:11

Input Set : A:\208859.txt
Output Set: C:\CRF3\06072001\I780224A.raw

L:377 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8
L:380 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8
L:383 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8
L:386 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8
L:389 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8
L:392 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8
L:395 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8
L:398 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8
L:401 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8